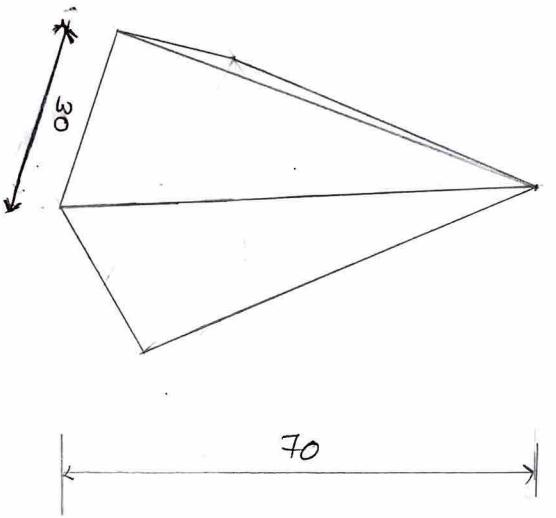
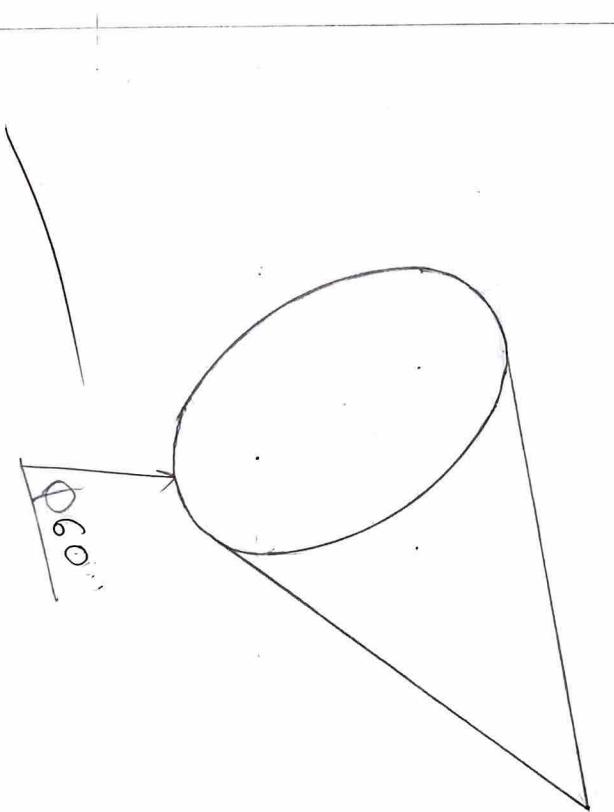


(3) A pentagonal pyramid side of base 30 mm & height 70 mm is resting with its base on H.P. Draw the isometric drawing of the pyramid.

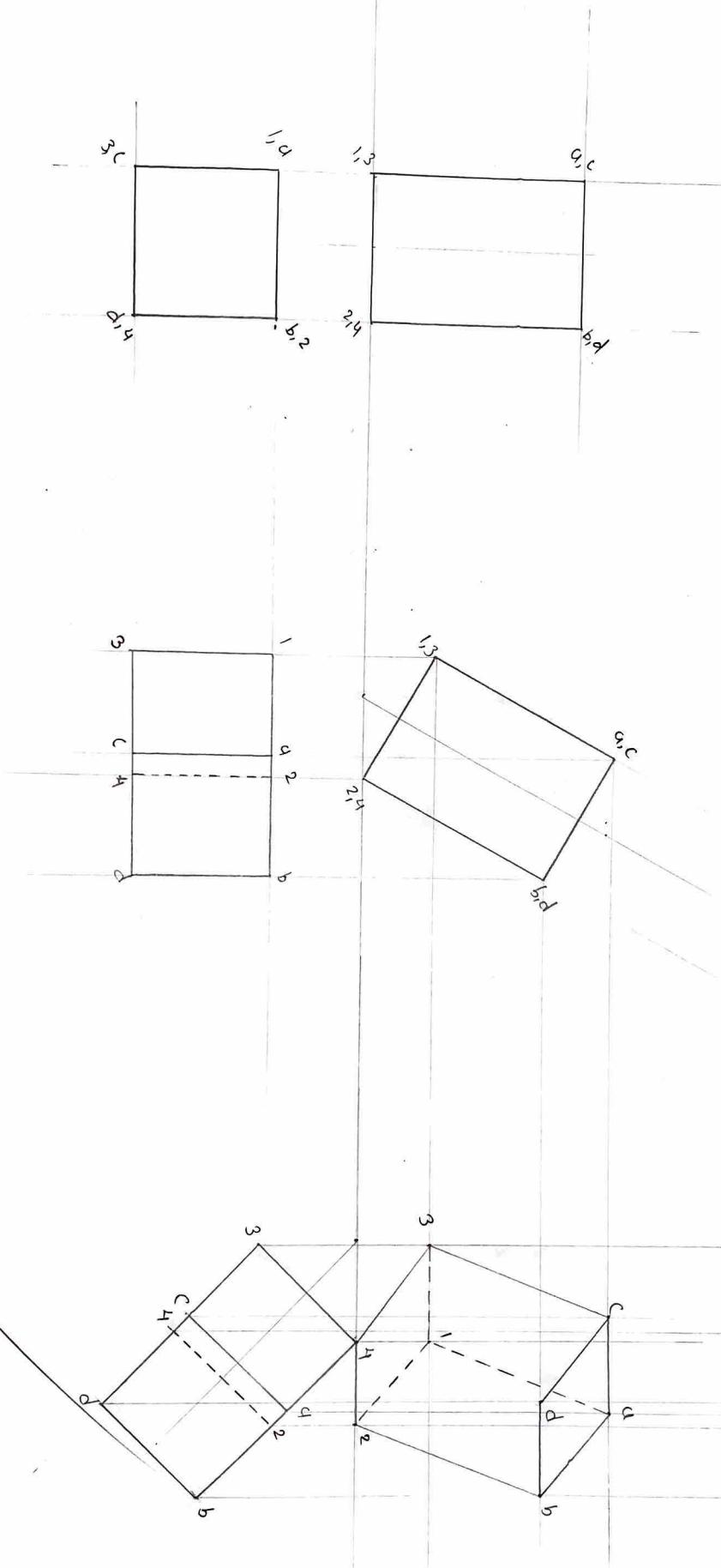


(4) Draw the isometric drawing of an object which has FV & TV as equilateral triangle & LHSV as a circle of 60 mm diameter.



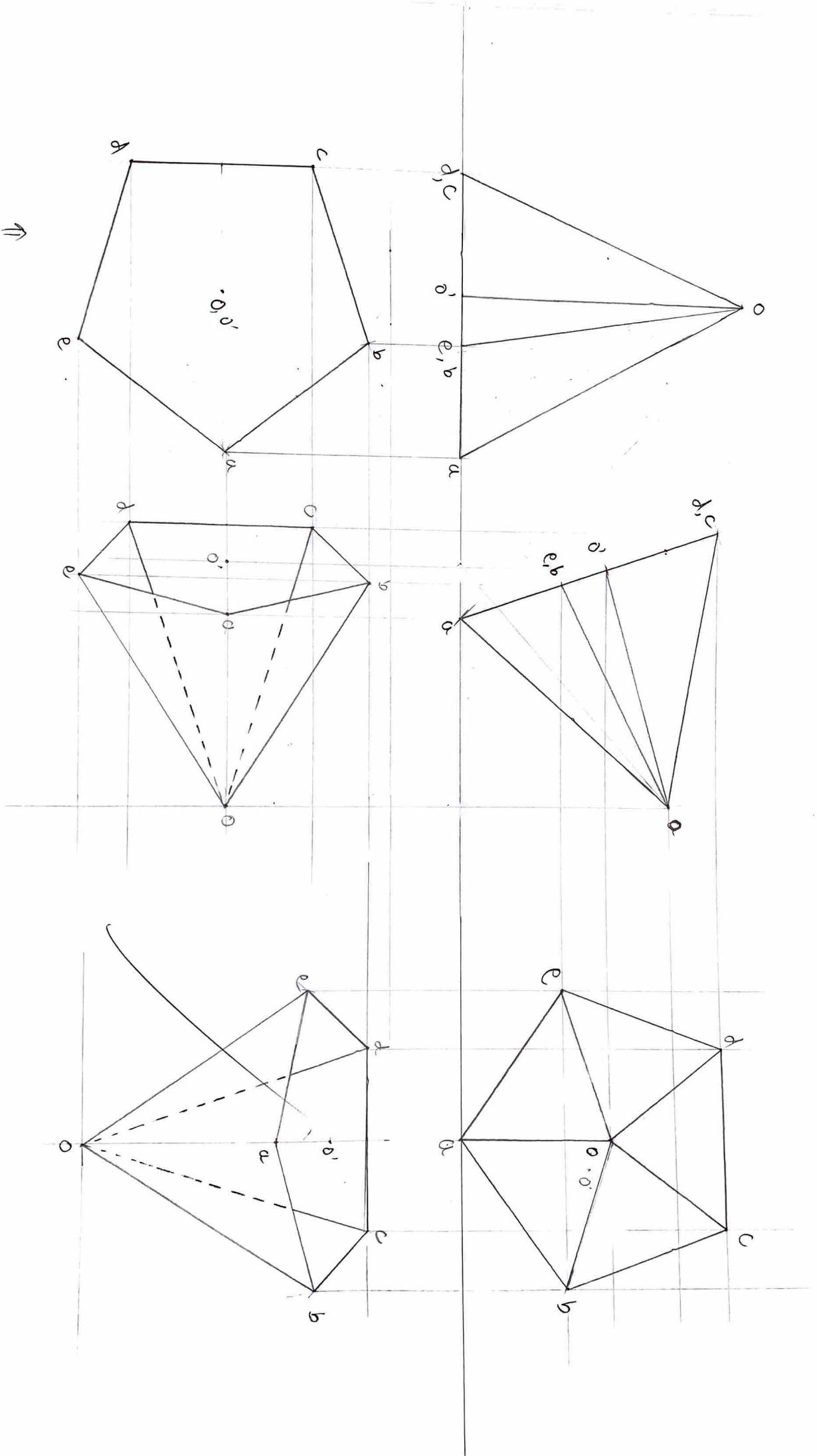
Projection of Solids

(1) A square prism side of base 30 mm and height 45 mm is resting on HP on one of the edges of the base. The side on which it rests on HP makes 45° with VP. Rectangular face containing that edge on which on HP makes an angle 60° with HP. Draw the projections of prism.

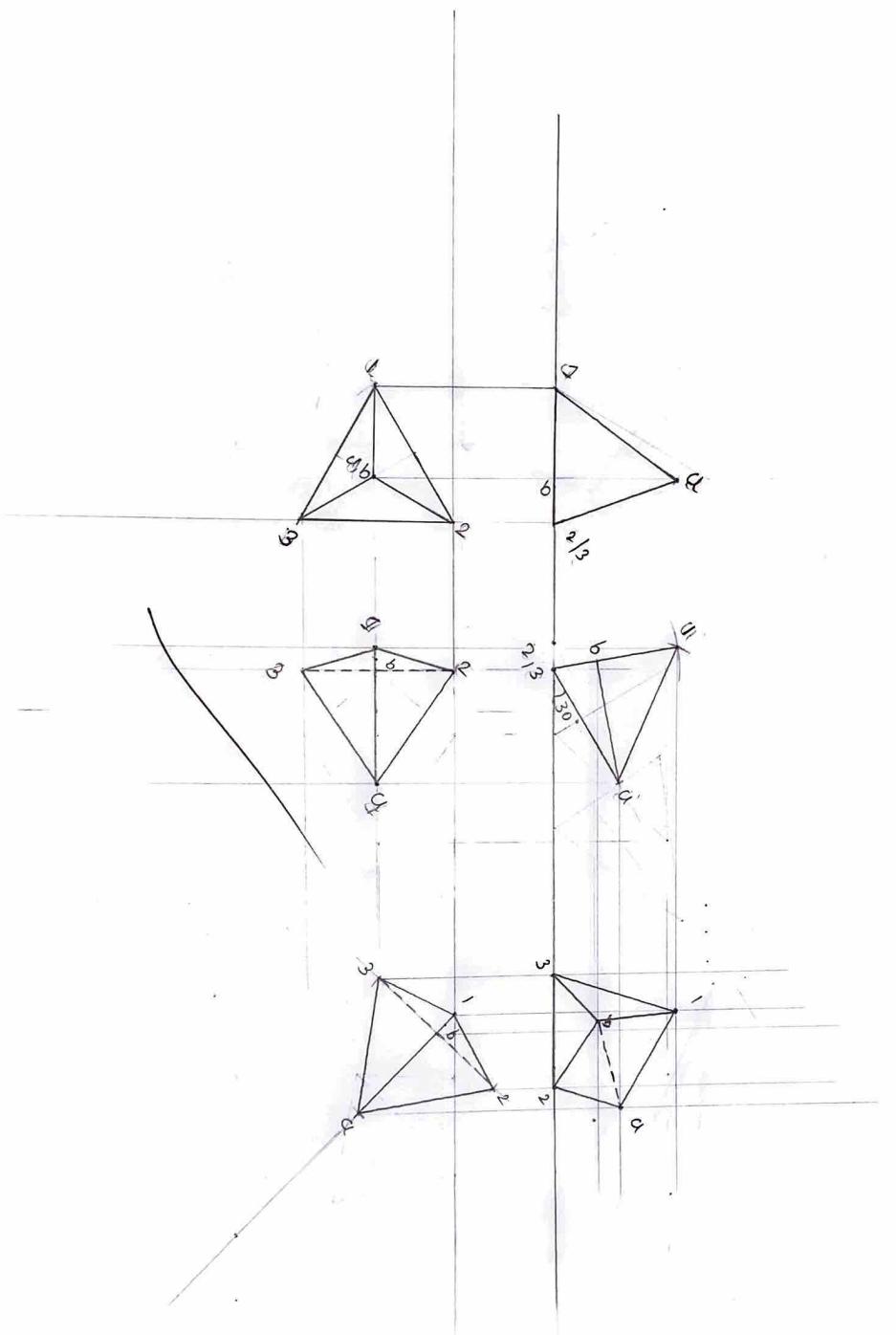


(v) A hexagonal pyramid of 30 mm side of base and 45 mm length of axis is resting on one of the triangular faces on HP. Draw the projections of the pyramid when the edge of base which is HP is inclined at 60° to the VP.

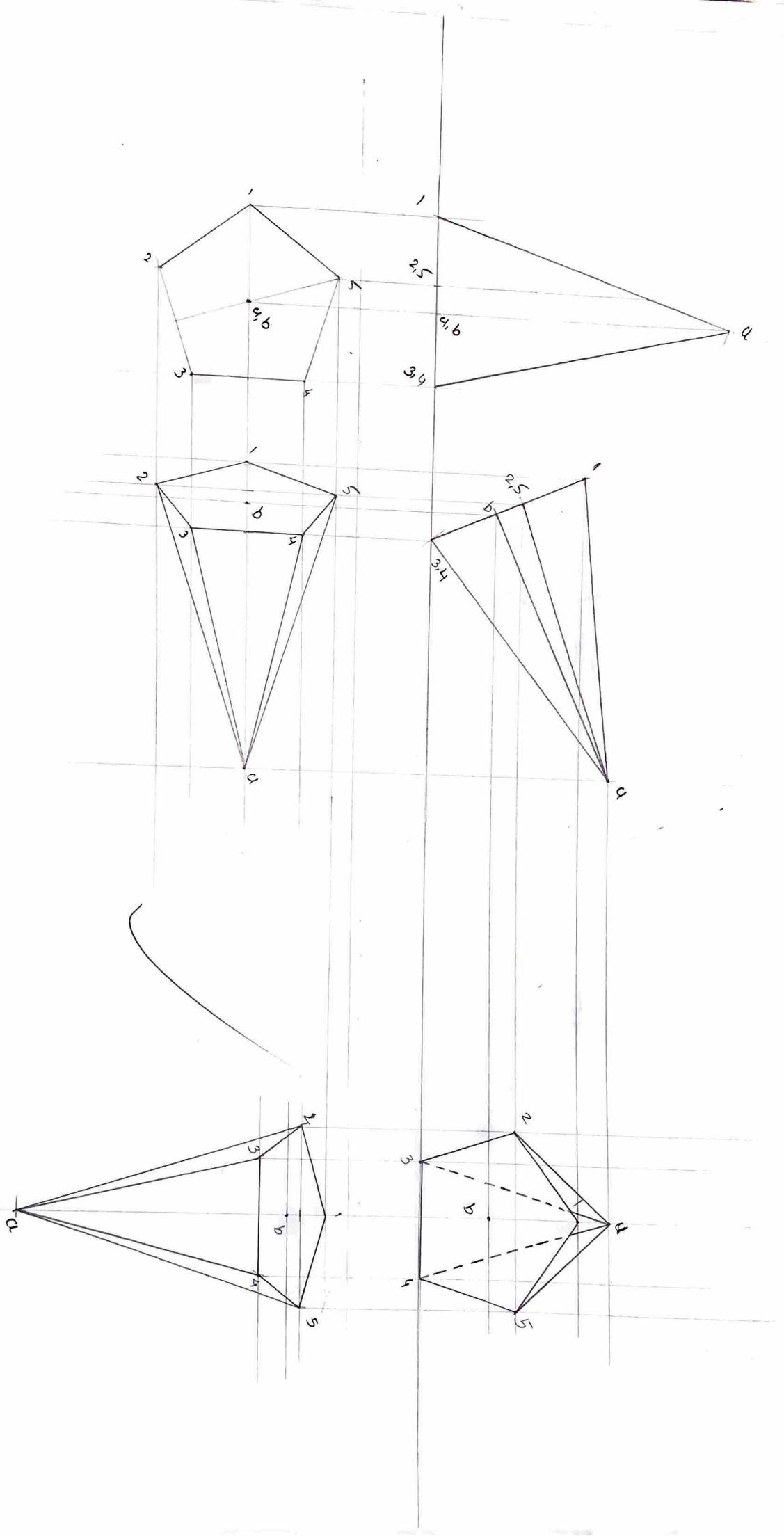
(3) A right regular pentagonal pyramid side of base 50 mm and height 80 mm rests on one of the corners of its base on the HP, the base being tilted up until the open face is 60 mm above HP. Draw the projections of the pyramid with the edge of base opposite to the corner on which it is resting is made parallel to VR.



(8) A tetrahedron of 30 mm side is resting with one of its edge on HP the edge on which it rests is inclined 30° to VP and a face containing that edge is inclined 30° to HP. Draw the projections of solids.



(A) A pentagonal pyramid with sides of its base 30 mm and height 30 mm rests on an edge of the base. The base is tilted until apex 50 mm above the level of the edge on which it rests. Draw the projections of the pyramid when the edge on which it rests is parallel to the V.R. Use auxiliary plane method.

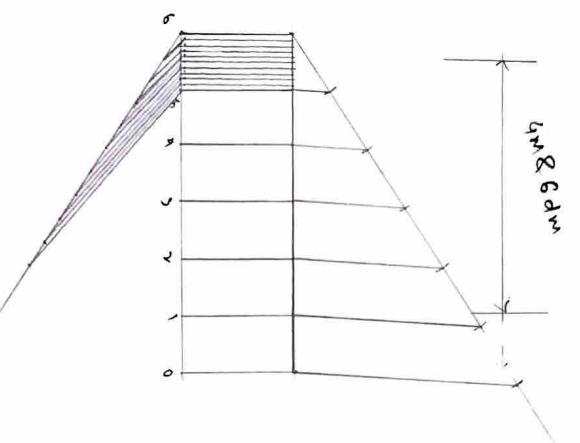


Q1) Given scale 1 cm = 1 m to read declivities to meadow, maximum distance of 6 cm. Show on 1st a distance of 4 m and 6 dm.

1 m = 1 m

$$R.F. = \frac{1}{100}$$

$$\text{Actual length} = \frac{1}{100} \times 600 = 6 \text{ cm}$$



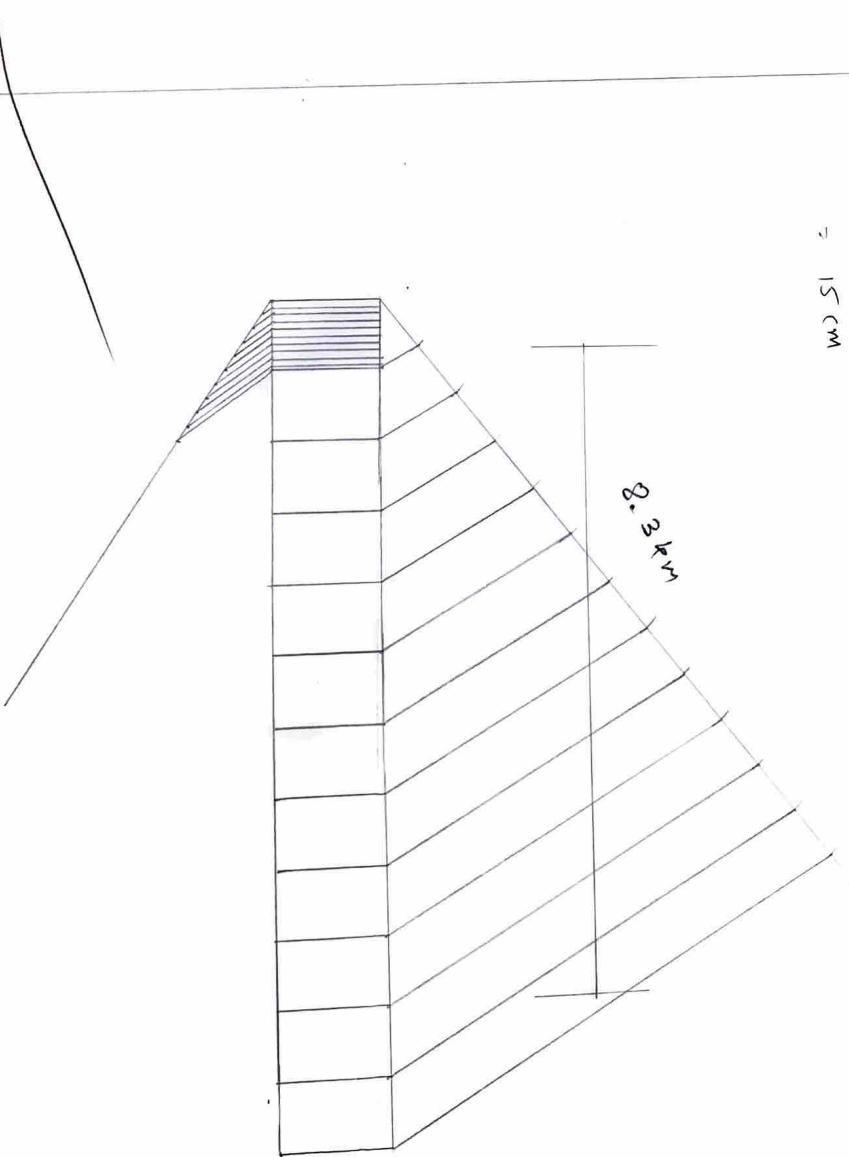
Q2) In a map 72 km distance is shown by a line drawn along the R.F. and construction a plain scale to read kilometers and kilometers for max 72 km shown a distance 8.3 km on it.

90 cm = 72 km

$$R.F. = \frac{4}{5} \text{ km}$$

$$R.F. = \left(\frac{5}{4 \times 1000 \times 100} \right) \times (12 \times 1000 \times 100) \text{ cm}$$

$$= 15 \text{ cm}$$



Q3 The Distance between two station is 210 km A passenger train covers the distance 7 hour construct a plan scale to 1m up to single min. RF : $\frac{1}{2,00,000}$. Indicate the distance travelled by train

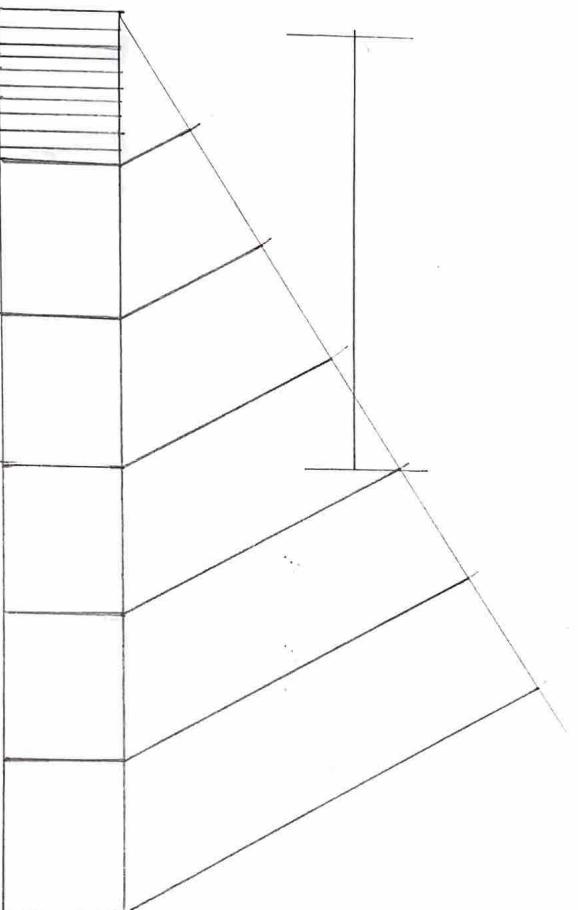
$$\rightarrow 210 \text{ km in } 7 \text{ hours}$$

If means 30 km in 1 hour

Distance travelled in 1 min

$$= \frac{30}{60} \times 29 = 14.5 \text{ km}$$

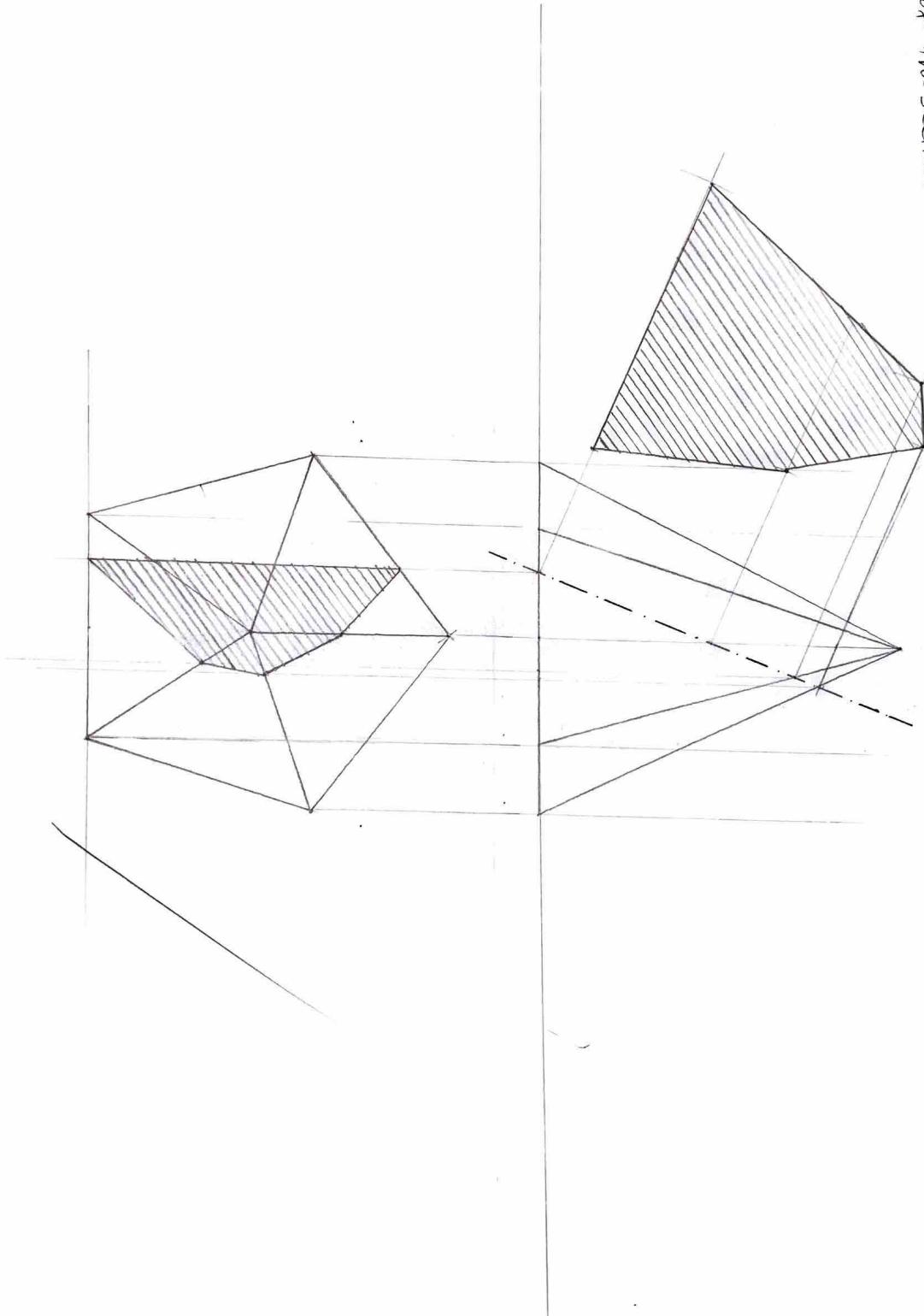
Length of drawing, $\frac{1}{2,00,000} \times 3 \times 10 \times 1000 \times 100$



8/

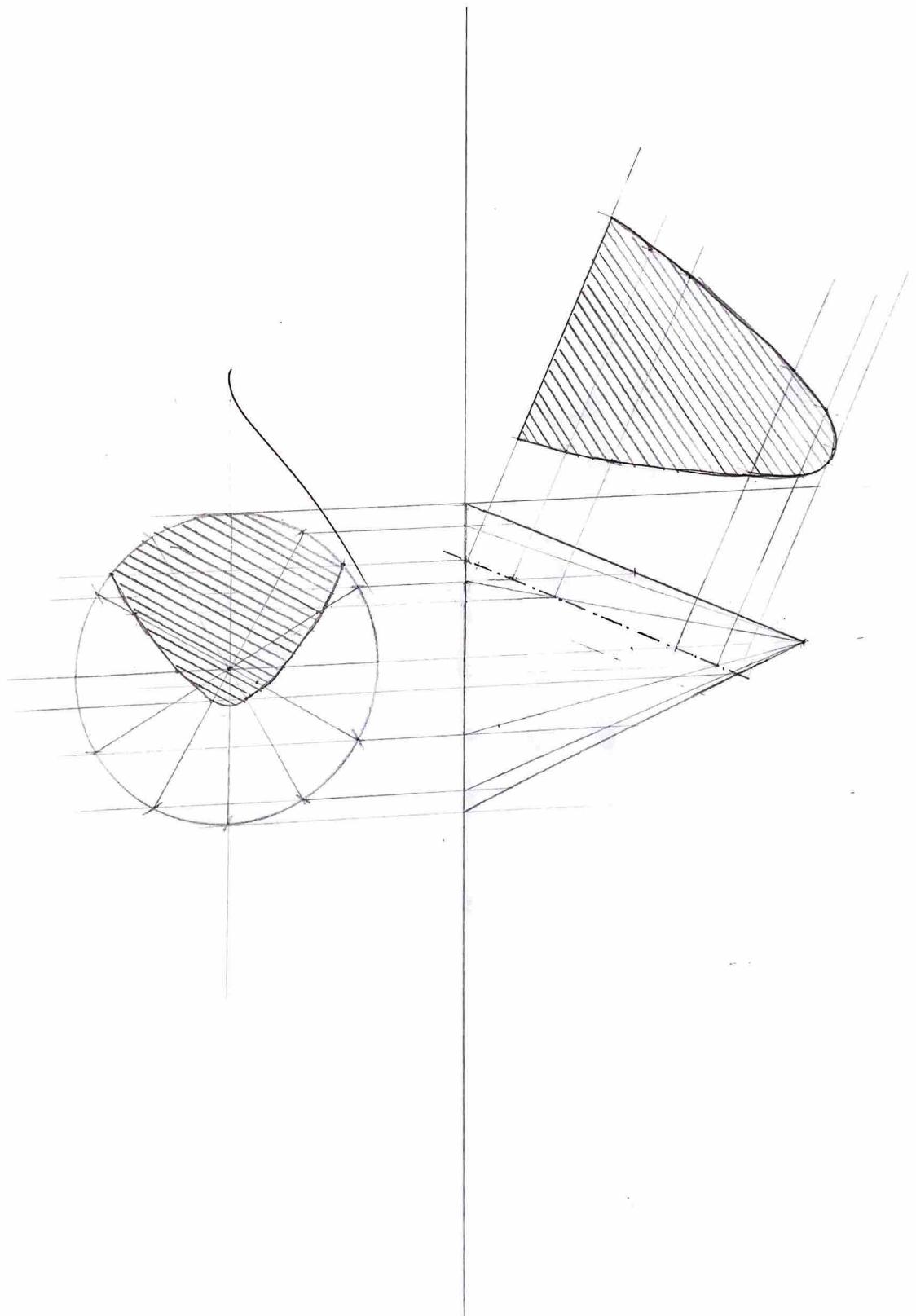
Section of solids

A pentagonal pyramid, sides of the base 50 mm and height 80 mm is resting on HP on one of the base width one of the edge base away from VP & is parallel to VP. It is cut by an AIP bisecting the axis, the distance of the axis the distance of the section plane from the apex being 15 mm. Draw the elevation sectional plan and the shape of the section.



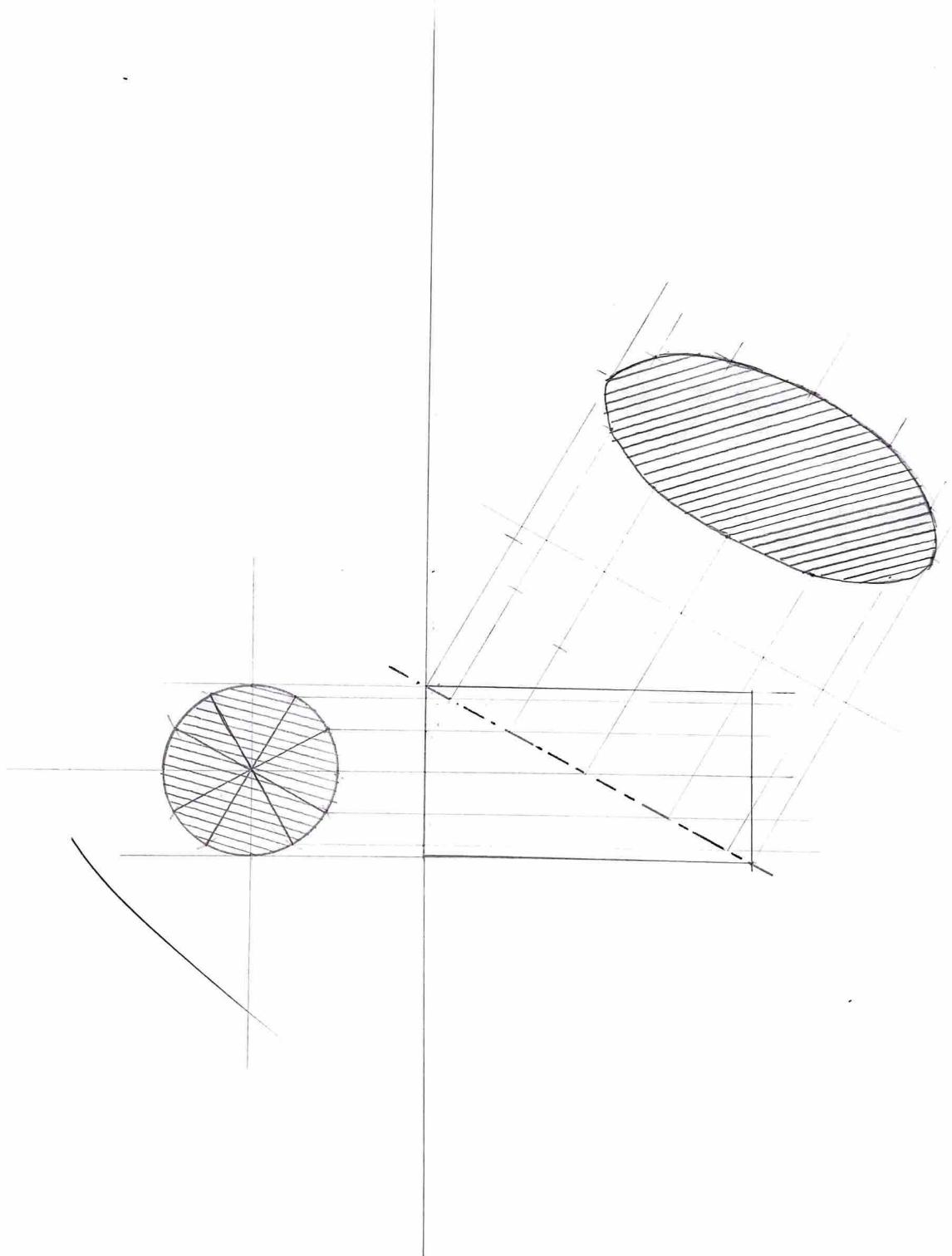
Q2

A cone of diameter 40 mm & 80 mm height is cut by a section plane such that the true shape of section is parabola of 70 mm unit and the shape available in plan. Find the inclination of section plane with both the reference plane and axis of cone.



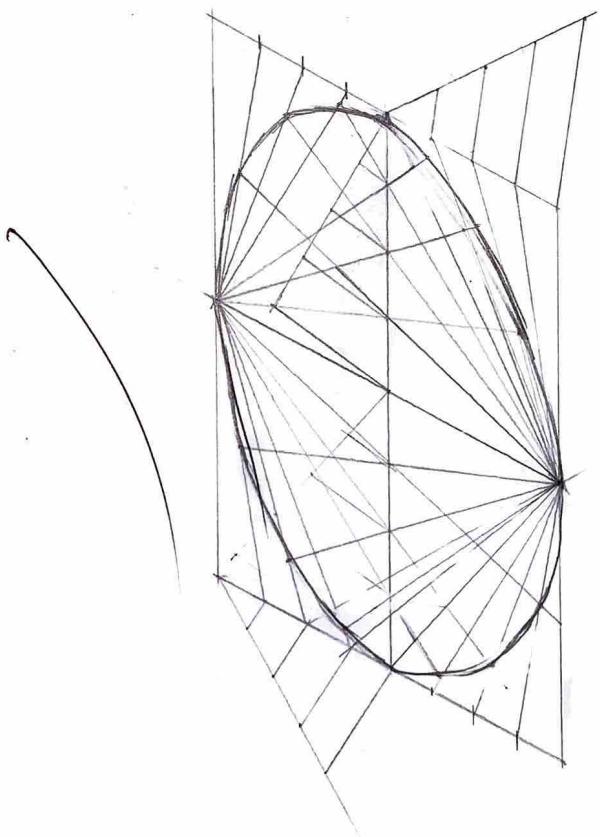
~~Q-11~~

A cylinder 50 mm diameter at base and 75 mm height of unit has one of its ends on the H.P. It is cut by end A.O.J.o.P. in such way that the true shape of the section is an ellipse of largest possible major axis. Draw the sectional plan, true shape and find the inclination of the sectional plane.



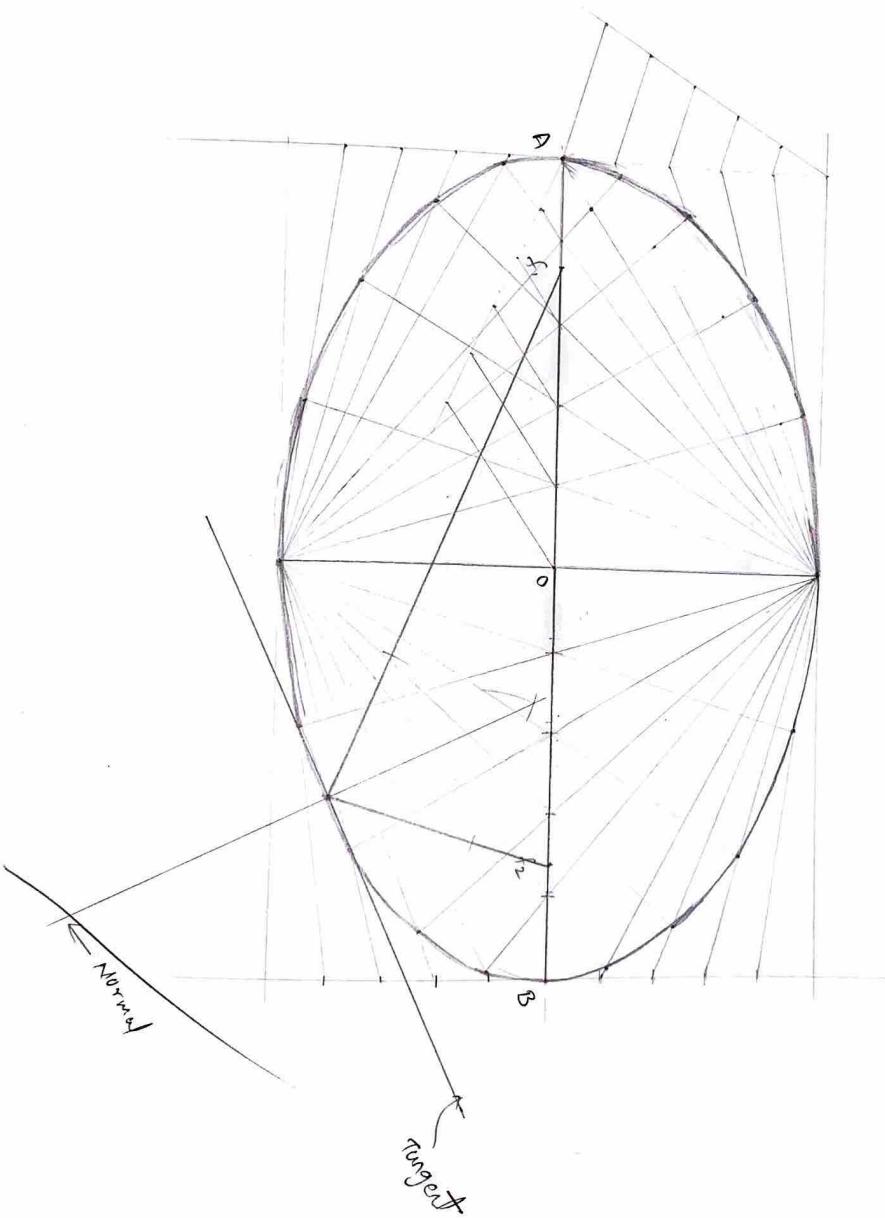
Engineering Curves

Q-2
Two points A & B are 100 mm apart. A point C is 75 mm from A and 45 mm from B from ellipse passing through points A, B and C so that AB is major Axis.



Q1

The distance between two coplanar fixed points is 110 mm. Trace the complete path of a point G moving in the same plane in such away that the sum of the distance from the fixed points is always 150 mm. Name the curve & find its eccentricity. Draw normal and tangent at any point on the curve.



Q/

ABCD is rectangle of 100×60 mm. Draw an ellipse through all the four corners A, B, C, D of the rectangle considering mid points of the smaller sides as focal points. Use concentric circle method and find eccentricity. Draw normal and tangent at any point on the curve.

